

Abstract

A mould for horizontal casting of molten metal comprising a mould body forming an open-ended mould cavity having an inlet end and an outlet end. An annular permeable wall member is mounted in the mould body adjacent the inlet end of the mould cavity with an inner face thereof forming an interior face of the mould. A refractory transition plate is mounted at the inlet end of the mould cavity, this transition plate providing a mould inlet opening having a cross-section less than that of the mould cavity. This provides an annular shoulder at the inlet end of the cavity. Means are provided for feeding molten aluminum through the inlet opening. Separate conduits are also provided for feeding a gas into the shoulder and via the permeable wall means for providing a layer of gas between the metal and the inner face of the mould. A gas that is more reactive with molten aluminum is fed into the shoulder and a less reactive gas is fed via the permeable wall. The reactions with the molten aluminum create a skin or shell on the aluminum which provides smooth passage through the mould and allows for more rapid secondary cooling of the emerging ingot.